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AN ANNOTATED CATALOGUE OF THE HYRACOIDEA IN THE AMERICAN MUSEUM OF NATURAL HISTORY, WITH A DESCRIPTION OF A NEW SPECIES FROM THE LOWER CONGO¹

BY ROBERT T. HATT

The preparation of an extended report on the Hyracoidea collected by the American Museum Congo Expedition has led to a review of the species of hyraxes represented in this museum. As certain observations made during this study would be somewhat irrelevant in a Congo report they are here given earlier publication, together with a description of a hitherto unrecognized rock hyrax collected by the Congo Expedition.

In the recognition of but a single genus of hyraxes I have followed Thomas, as species discovered since the time of his revision (1892, Proc. Zool. Soc., London., pp. 50-76) have only tended to strengthen his conclusion that every degree of gradation between characters of the genotypes of *Procavia*, *Heterohyrax*, and *Dendrohyrax* is to be found in some form.

It is a pleasure to thank the authorities of Field Museum of Natural History and the United States National Museum for the loan of specimens in their collections, and to acknowledge my appreciation for the helpful suggestions of Messrs. H. E. Anthony and James P. Chapin.

Procavia chapini, new species

TYPE.—American Museum of Natural History, No. 53800, American Museum Congo Expedition, No. 7002, adult (Stage VIII) female, skin and skeleton in good condition. Collected on the summit of Loadi Hill, five kilometers southwest of Matadi, Bas Congo District, December 27, 1914, by James P. Chapin.

GENERAL CHARACTERS.—A pale-colored rock hyrax with a well-marked light yellow dorsal spot. It approaches the typical members of the *Heterohyrax* group in its brachydont premolars and molars, the open orbits, the early closure of the parietal and interparietal sutures, the wide separation of the temporal fossæ, and the double rooted PM₁. It differs from the typical heterohyraxes in its large size, long muzzle, flat dorsal profile, highly elevated basisphenoid, and in the mammary formula, which is 0—2=4.

DESCRIPTION.—Pelage coarse, the hairs short. The guard hairs of the back measure about 24 mm. in length. The general color of the back is near drab (color nomenclature of Ridgeway). The color over the head is darker than that of the back

¹Scientific results of the Congo Expedition. Mammalogy, No. 12.

and has a faint tawny wash overlying the area. Above the eyes is a broad band of light gray. The cheeks and sides are lighter than the back, but rather sharply demarcated from the belly, which is tawny yellow washed with light ochraceous over the chin and throat. Inside the ears is a small patch of light yellow hairs. The outer surfaces of the conchæ are covered with hairs the color of those in the interauricular region. Behind the ear is a lighter, grayer patch. The visible portion of the dorsal spot is about 50 mm. long and 10 mm. wide. Terminally its hairs are a pale olive-buff, basally they are white. The hairs of the fore and hind feet shade into a light gray.

The individual fur hairs of the anterior half of the back are a natal brown for their basal half. The shaft changes to a wood brown, then to another narrow band of natal brown. There is a pale olive-buff subterminal ring, 3 mm. broad, and a black tip. On the posterior part of the back the fur differs in that the basal half of the back is a light brownish-drab.

The skull is long and narrow, particularly in the nasal region. Its dorsal profile is very nearly straight from the middle of the parietals to the tip of the nasals. The occiput is moderately narrow. The temporal fossæ do not extend beyond the level of the anterior end of the supraoccipital and they remain widely separate from each other. The diastema is very long for a rock hyrax, about equalling the length of the premolar series. The cheek teeth are brachydont and narrow and the tooth-row very lightly bowed outward. The basisphenoid and basioccipital slope sharply down to their common suture which thus lies across a high eminence. The lacrymal bone extends forward along the maxillonasal suture for about 3 mm. Its process is as broad at its base as is the lacrymal bone. The lacrymal foramen is peripheral.

PARATYPE.—American Museum of Natural History, No. 53801, juvenile (Stage V) female, skin and skull. This specimen was collected the same day and in the same place as the type. In color it agrees closely with the adult specimen, and in cranial characters shows only a few age differences. The parietal and interparietal sutures are already closed.

MEASUREMENTS OF THE TYPE.—Collector's measurements of the animal in the flesh: total length, 430 mm.; tail, 10; hind foot, 60; ear from notch, 30. Skull measurements: greatest length, 95.0; condylobasal length, 94.6; length nasal suture, 22.0; frontal suture, 36.5; zygomatic breadth, 50.3; postorbital breadth, 25.7; greatest breadth nasals, 21.0; least distance between lacrymal and malar, 4.7; height premaxillæ, 11.8; length premaxilla, 22.0; closest approximation of temporal fossæ, 12.2; temporal fossæ to occiput, 8.5; skull height, 31.9; breadth palate inside M^1 , 16.8; diastema, 16.2; width PM^2 , 3.8; width M^1 , 5.3; height M^3 , 2.5; length PM_1 , 3.4; length upper PM-M series, 32.0; length mandible, 84.7.

Procarvia chapini is not closely related to the neighboring Angolan hyraxes. From the coastal species, *Procarvia welwitschii*, it differs in all the respects that separate it from other members of the *capensis* group. The inland Angolan species, *P. bocagei*, differs greatly from *chapini* in color and character of the fur, which in the Angolan species is long and luxuriant. In cranial characters there is greater resemblance, both species bearing the stamp of the *Heterohyrax* group. The chief differences lie in the smaller size, broader teeth, proportionately broader

skull, elevated supraorbital ridges, shorter snout, and flatter basicranium of *bocagei*.

Procavia chapini combines pelage, cranial, and mastological characters in a manner hitherto unreported for any other species, and for this reason it is given full specific rank.

HYRAXES IN THE AMERICAN MUSEUM COLLECTIONS

***Procavia capensis* (Pallas)**

Cavia capensis PALLAS, 1767, Spicel. Zool., fasc. II, p. 16.

Four skins, four skeletons, four skulls, and one in alcohol, from various sources; localities unknown.

It is possible that some of these represent *P. habessinicus*, from which, it appears, *P. capensis* cannot be differentiated in juvenile skull stages.

***Procavia capensis capensis* (Pallas)**

Cape Colony, George District, Zebra: one skin and skull; T. S. Heyns, collector.

Cape of Good Hope: one mounted skeleton, on exhibition.

***Procavia capensis natalensis* Roberts**

Procavia capensis natalensis ROBERTS, 1924, Ann. Transvaal Museum, X, part 2, p. 76.

Natal, Pondoland: one skin with skull.

Natal: three skins with skeletons; B. N. Bridgman, collector.

The specimen from Pondoland, a half-grown individual, is peculiar for the broad band of dark hair crossing the throat, and for the reduced size and sharp definition of the white areas of the under parts.

The four skulls, all young, show remarkably large parietals for members of the *capensis* group. The parietal of one Stage V skull was 15.5 mm. broad and 11.2 long.

***Procavia capensis coombsi* Roberts**

Procavia capensis coombsi ROBERTS, 1924, Ann. Transvaal Museum, X, part 2, p. 76.

Southern Rhodesia, Matabeleland, Gwanda: one skin with skull; R. Douglas, collector.

Transvaal, Pretoria district: one skin with skull; A. Haagner, collector.

Procavia welwitschii (Gray)

Hyrax welwitschii GRAY, 1868, Ann. Mag. Nat. Hist., (4) I, p. 43.

Angola, Hanha: one skin with skull; H. Lang, collector.

Angola, Mossamedes: two skins with skulls; H. Lang, collector.

Angola, Pico Azevedo: one skin with skull; H. Lang, collector.

All of these skins have a conspicuous light spot over the eye and numerous well-defined black spots distributed over the back and flanks. These black patches lie immediately behind the long vibrissæ-like hairs that are scattered over this region.

Procavia butleri Wroughton

Procavia butleri WROUGHTON, 1911, Ann. Mag. Nat. Hist., (8) VIII, p. 461.

Sudan, Jeblein: five skins, two skeletons, three skulls, two in alcohol; H. E. Anthony, collector.

Procavia scioana (Giglioli)

Hyrax scioanus GIGLIOLI, 1888, Ann. Mus. Genova, VI, p. 21.

A skin with skeleton of a hyrax once living in the New York Zoological Park may be referred to this species. The exceptionally great extent of the black dorsal spot, enormous body size and great diameter of the teeth are in marked contrast to hyraxes of the *capensis* group.

Procavia syriaca (Schreber)

Hyrax syriacus SCHREBER, 1784, 'Säugethiere,' Pl. ccXL-B; 1792, idem, VI, p. 923.

Syria: one skull and two juvenile skeletons without skulls.

Procavia alpini (Gray)

Hyrax alpini GRAY, 1868, Ann. Mag. Nat. Hist., (4) I, p. 45.

Abyssinia, Walamo, Lake Abaya: one skin with skull; T. D. Carter, collector.

Procavia alpini minor Thomas

Procavia abyssinica minor THOMAS, 1892, Proc. Zool. Soc., London, p. 66.

Sudan, Red Sea Hills, Khor Sabat: one skin with skull; H. E. Anthony, collector.

This specimen, a female with the third molar worn down almost to the cingulum, was measured by the collector as follows: total length, 475 mm.; tail, after skinning, 28; foot, 65.

The cranial measurements are: greatest length, 79.5; condylobasal length, 77.3; zygomatic breadth, 44.5; length nasal suture, 18.3; length upper diastema, 7.5; length premolar-molar series, 33.3; breadth M^1 , 6.7.

***Procavia mackinderi mackinderi* Thomas**

Procavia mackinderi THOMAS, 1900, Proc. Zool. Soc., London, p. 176.

Kenya Colony, Mt. Kenya, alt. 14,500 ft.: two skulls and other skull fragments; J. P. Chapin, collector.

One of these pick-up skulls is that of an extremely old individual in which a necrotic condition of the left half of the mandible was associated with loss of the lower incisors and consequent overgrowth of the upper incisors. The smoothly worn tips of these, at the points where they would have encountered the skin, attest that the animal remained alive long after the normal feeding process had become impossible.

Another dental anomaly encountered in one of the fragments is an extremely deep groove in the median surface of the right upper incisor. The back of the alveolus of this tusk is exposed and shows that this groove at the growing root is occupied by a thin sheet of bone. The left upper incisor, also in place, has no counterpart of this groove.

***Procavia mackinderi zelotes* Osgood**

Procavia mackinderi zelotes OSGOOD, 1910, Field Mus. Nat. Hist., Zool. Ser., X, No. 2, p. 5.

Kenya Colony, Kijabe: two skins with skulls and incomplete skeletons; H. Lang, collector.

Kenya Colony, Kidong Valley, Quarantine Station: three skins with skulls; J. P. Chapin, collector.

The series examined, including the type and three paratypes of *zelotes*, and other specimens from the Field and National Museums, has shown that *Procavia mackinderi zelotes* and *Procavia jacksoni* are not representatives of different species, but that they grade one into the other to such an extent that many specimens from the Rift Valley in the region of Naivasha cannot strictly be assigned to one form more than to the other.

Respective of the intergradation of *jacksoni* and *zelotes* it may be noted that in essential cranial characters there is the following assortment:

Closed orbits are found only in the type of *zelotes* (from between Naivasha and Kijabe) and in specimens from Kijabe.

Temporal fossæ extended to occipital plane are found in adult specimens from Kijabe, in the type of *zelotes*, and in specimens from the Kidong Valley and Naivasha. They are not so elongated in specimens from Elmenteita.

The short, broad type of skull with short diastema is encountered at Kijabe, in the type of *zelotes*, and in specimens from the Kidong Valley and Loita Plains. Elongated skulls with long diastema are found at Naivasha and Elmenteita.

Flattened frontals with raised supraorbital ridges are characteristic of the type of *zelotes* and specimens from Kijabe, the Kidong Valley and Loita Plains. An arched frontal is found in specimens from Elmenteita and Naivasha.

The temporal fossæ of the type of *zelotes* and specimens from Kijabe, the Kidong Valley, Loita Plains and Lake Naivasha approach to form a small sagittal crest, whereas these fossæ in specimens from Elmenteita remain widely separate.

The molariform teeth of *zelotes* type, and specimens from Kijabe, the Kidong Valley and Loita Plains are broader than those in specimens from Naivasha and Elmenteita.

In characters of the pelage there appears to be no constancy, for while specimens from the Kijabe-Kidong region average somewhat redder than those from the region of Elmenteita, individual specimens in each group resemble individuals in the other so perfectly that no distinction is possible.

Hyraxes of this group from Mt. Lololokwi and the Rumathe River, referred by Hollister (1924, Bull. 99, U. S. N. M., p. 140) to *zelotes*, are different from their neighbors to the south and west in a consistently lighter gray color and slightly greater skull size, but not different enough, perhaps, to justify nomenclatorial distinction.

A peculiarity exhibited in a young specimen (Stage VI) from Lake Naivasha (U. S. N. M. No. 162826) is the obliteration of the interparietal-supraoccipital suture. Because in other characters it agrees with other representatives of the *mackinderi* group, it doubtless is but a variant of this species.

The specimens from Kijabe were mentioned by J. A. Allen in his report on the mammals of the Tjäder Expedition (Bull. A. M. N. H., XXVI, Art. 12, p. 166). Here the older of the specimens was assigned to *Procavia jacksoni*, the other to *Procavia brucei*.

Procavia mackinderi jacksoni Thomas

Procavia jacksoni THOMAS, 1900, Proc. Zool. Soc., London, p. 176.

Kenya Colony, Elmenteita: three skins with skulls; H. Lang, collector.

Kenya Colony, Solai: one skin with skull; H. Lang, collector.

The specimens from Elmenteita are those referred by J. A. Allen (*loc. cit.*) to *Procavia brucei*, and that from Solai (between Ravine and Lake Hannington), doubtfully assigned to the then little-known *P. emini*. Although this Solai hyrax is too young (Stage V) to make identification certain, the general agreement in skull characters and the proximity to the type locality of *jacksoni* lead me to consider it a color mutant of that race.

An East African skin without skull, collected by Paul J. Rainey, but otherwise without data, is tentatively referred to this form.

Procavia matschiei Neumann

Procavia matschiei NEUMANN, 1900, Zool. Jahrb., Syst., XIII, p. 555.

Tanganyika Territory, Mwanza, Sagayo: nine skins and twelve skulls; A. Loveridge, collector.

Tanganyika Territory, Mwanza, Shandwa: six skins with skulls; A. Loveridge, collector.

Eighteen of the twenty specimens mentioned in the Loveridge report (Proc. Zool. Soc., 1923, p. 739) under the name of "*Procavia brucei matschiei*" were the above listed specimens, whereas the two others were *Procavia brucei victoria-njansæ*. It is not surprising that Mr. Loveridge did not recognize the presence of two distinct species of hyrax in his collections made in the Mwanza district, for superficially they bear striking resemblance. Though the skulls of these two species are totally different in size and characters, one being typical of the small-toothed *Heterohyrax* group, the other of the large-toothed *Procavia*, their skins are easily confounded. However, they may be distinguished by their dorsal spots. In *P. matschiei* this spot is broad, and there is a naked area of skin in its center. In *P. brucei victoria-njansæ*, on the other hand, the hairs of the dorsal spot cover a narrow, linear area in which there is no bare spot.

Procavia lopesi Thomas

Procavia lopesi THOMAS, 1907, Ann. Mag. Nat. Hist., (7) XIX, p. 520.

Belgian Congo, Upper Uele, Aba: twenty skins with skulls, five skeletons, one fetus in alcohol; H. Lang and J. P. Chapin, collectors.

Belgian Congo, Upper Uele, Faradje: one skin with skull; H. Lang and J. P. Chapin, collectors.

Belgian Congo, Upper Uele, Vankerckhovenville: one skin with skull; J. P. Chapin, collector.

A full report of this series will appear in a forthcoming bulletin.

Procavia erlangeri comata Brauer

Procavia erlangeri comata BRAUER, 1917, Sitz. Ber. Gesell. Naturf. Freunde, p. 302.

Abyssinia, ten miles south of Harrar: one skin with skeleton; T. D. Carter, collector.

Abyssinia, Harrar: two native skins; T. D. Carter, collector.

Abyssinia, Harrar, Dokgou: one skin with skull, one fetus in alcohol; B. Brown, collector.

Mr. Carter tells me that the black-headed hyrax which he shot south of Harrar was in the same rock pile with the specimens of *Procavia brucei hararensis* that he collected the same day.

Procavia brucei hararensis (Brauer)

Heterohyrax brucei hararensis BRAUER, 1917, Sitz. Ber. Gesell. naturf. Freunde, p. 297.

Abyssinia, ten miles south of Harrar: seven skins with skulls; T. D. Carter, collector.

Abyssinia, Harrar: one skeleton; B. Brown, collector.

The specimens collected by Mr. Carter are possibly from the same rocks as the type and paratypes of Brauer, since, as he states, the specimens were taken in the rocky area nearest Harrar. Brauer's description applies well to the specimens, except for diastema length which is given as 14.7 to 16.3 mm. and which in the series at hand does not exceed 9.5.

Procavia brucei borana Lonnberg

Procavia brucei borana LONNBERG, 1912, Ann. Mag. Nat. Hist., (8) IX, p. 66.

Kenya Colony, Archer's Post: two skins with skulls; Eastman-Pomeroy-Akeley Expedition.

Procavia brucei maculata Osgood

Procavia brucei maculata OSGOOD, 1910, Field Mus. Nat. Hist., Zool. Ser., X, No. 2, p. 6.

Kenya Colony, Lukenya Hills: nine skins with skulls, three alcoholics¹; Eastman-Pomeroy-Akeley Expedition.

¹In the collections of the Department of Comparative Anatomy, A. M. N. H.

Kenya Colony, Sultan Hamud: two skulls; J. L. Clark, collector.

The series of topotypes collected by the Eastman-Pomeroy-Akeley Expedition is interesting in the bearing that it has on the contested status of Osgood's race. These specimens were collected in May and June, the type, and presumably the paratypes, in December. In two things the American Museum specimens are not accurately characterized by the type description. Osgood states that the dorsal spot is almost entirely pure white, whereas in the series that I have examined there is a strong cinnamon element in the dorsal spots of most specimens. Further, though the describer noted a strong black spotting of the back in his specimens, no trace of such spotting is seen in the present series except one very old male with greatly worn teeth.

Procavia brucei victoria-njansæ (Brauer)

Heterohyrax brucei victoria-njansæ BRAUER, 1917, Sitz. Ber. Gesell. naturf. Freunde, p. 299.

Tanganyika Territory, Mwanza, Sagayo: two skins with skulls; A. Loveridge, collector.

Tanganyika Territory, Mwanza, Shandwa: one skin with skull; A. Loveridge, collector.

As noted in this list, under the heading of *Procavia matschiei*, the collector confused the two rock hyraxes of the Mwanza district and reported them under the composite name "*Procavia brucei matschiei*."

From its nearest relative to the south, *P. b. prittwitzi*, this race differs strikingly in the following external characters:

1.—In *victoria-njansæ* the dorsum of the hind feet is dark and grizzled; in the southern race the area is silvery white.

2.—In *victoria-njansæ* the belly is yellowish white; in the contrasted form it is white.

3.—The crown is rufous in *P. b. victoria-njansæ*, whereas in *prittwitzi* it is usually a darker shade of the back color.

4.—There is no conspicuous superciliary spot in *victoria-njansæ*, whereas in the southern race there is a large, avellaneous superciliary spot.

Procavia brucei prittwitzi (Brauer)

Heterohyrax brucei prittwitzi BRAUER, 1917, Sitz. Ber. Gesell. naturf. Freunde, p. 299.

Tanganyika Territory, near Itigi, Gwaos: one skin with skull; A. Loveridge, collector.

Tanganyika Territory, Dodoma, Mahaka: three skins, two skulls; A. Loveridge, collector.

Tanganyika Territory, Mkalama, Mtali's: one skin with skull; A. Loveridge, collector.

Tanganyika Territory, Lake Rukwa: one skull; Capt. Terpich, collector.

Tanganyika Territory, Singida, Mjengo's: six skins, five skulls; A. Loveridge, collector.

Tanganyika Territory, Singida, Poona: one skin with skull; A. Loveridge, collector.

Tanganyika Territory, Tabora: one skin; A. Loveridge, collector.

Tanganyika Territory, Tindi (between Mwanza and Tabora): two skins with skulls; F. G. Carnochan, collector.

Tanganyika Territory, locality not known: two skins; A. Loveridge, collector.

The specimen from Lake Rukwa, though a topotype of *Heterohyrax munzneri rukwaensis* Brauer, appears to be referable to the smaller form, represented so well by the Loveridge collection.

It is interesting to note that in both *Procavia b. prittwitzi* and *P. b. victoria-njansæ* the parietal suture closes later in life than it does in other members of the *Heterohyrax brucei* group (*albipes*, *borana*, *harrensis*, *maculata*) remaining open over the anterior third of its course in some specimens of Stage VIII.

Procavia lademanni (Brauer)

Heterohyrax lademanni BRAUER, 1917, Sitz. Ber. Gesell. naturf. Freunde, p. 298.

Tanganyika Territory, Maripindi's (a village about one day's march north of Mt. Rungwe): two skins with skulls; R. Boulton, collector.

The two specimens are in Stage III. The mammary formula of 1—2=6, the fused parietals and interparietal, the supraoccipital pattern, are characteristic of a "*Heterohyrax*." The orbits, though yet open, are so nearly closed that one may presume closure in the adult. The fur character resembles that of the dendrohyraxes more than it does the typical hyraxes.

Procavia chapini Hatt

Described on p. 1 of this paper.

Belgian Congo, vicinity of Matadi: two skins with skeletons, two embryos in alcohol; J. P. Chapin, collector.

Procavia bocagei (Gray)

Hyrax bocagei GRAY, 1869, Ann. Mag. Nat. Hist., (4) III, p. 242.

Angola, Benguela, Chitau: one native skin; H. Lang, collector.

Angola, Benguela, Luimbale: one skin with skull; C. P. Chapman, collector.

Angola, Huila, Lubango: one skull and two embryos in alcohol; H. Lang, collector.

The mammary formula in a very young individual is 0—2=4 or possibly 1—2=6.

Procavia adolfi-friederici Brauer

Procavia (Dendrohyrax) adolfi-friederici BRAUER, 1913, Sitz. Ber. Gesell. naturf. Freunde, p. 132.

Belgian Congo, Central Kivu volcanoes, Kabara, 11,000 ft.: one skin with skull; J. P. Chapin, collector.

Belgian Congo, Kivu District, near Kibati, 6500 ft.: one skin with skull; J. P. Chapin, collector.

Belgian Congo, N. slope of Mt. Karisimbi, 11,100 ft.: one skin with skull; J. P. Chapin, collector.

The Kabara specimen (Kabara is a site on the saddle between Mt. Mikeno and Mt. Karisimbi) is virtually a topotype of *Procavia (Heterohyrax) helgei* Lonnberg and Gyldenstolpe, and agrees with the description of this species in every particular. However, three specimens in the Field Museum, collected by Edmund Heller at Kisolo (western Uganda, between Rutshuru and Kabale) would appear to bridge the gap between *helgei* and *adolfi-friederici*, with which the describers of the first do not seem to have made comparison, the subgeneric assignation of Brauer's species being somewhat misleading. The mammary formula of this species is 1—2=6.

Procavia adametzi zenkeri Brauer

Procavia adametzi zenkeri BRAUER, 1914, Sitz. Ber. Gesell. naturf. Freunde, p. 38.

French Congo, Karagoua Koudou: one skin; A. Baudon, collector. Cameroon, Edea: one skull; Gerloff, collector.

Procavia emini (Thomas)

Dendrohyrax emini THOMAS, 1887, Ann. Mag. Nat. Hist., (5) XX, p. 440.

Belgian Congo, southern Uele, Akenge: three skins with skulls; H. Lang and J. P. Chapin, collectors.

Belgian Congo, Ituri, Avakubi: one skin with skull; H. Lang and J. P. Chapin, collectors.

Belgian Congo, Ituri, Gamangui: four skins with skulls and one skeleton; H. Lang and J. P. Chapin, collectors.

Belgian Congo, Ituri, Medje: five skins with skulls, three skeletons, a gravid uterus and some viscera in alcohol; H. Lang and J. P. Chapin, collectors.

Belgian Congo, Ituri, Ngayu: one skin with skeleton; H. Lang and J. P. Chapin, collectors.

Belgian Congo, Uele, Niangara: three skins with skulls and one skeleton; H. Lang and J. P. Chapin, collectors.

Belgian Congo, southern Uele, Niapu: twenty-one skins with skulls and one skeleton, 3 fetuses in alcohol; H. Lang and J. P. Chapin, collectors.

A study of this fine series will be published in the report on the Hyracoidea collected by the American Museum Congo Expedition.

Procavia emini latrator Thomas

Procavia emini latrator THOMAS, 1910, Ann. Mag. Nat. Hist., (8) V, p. 285.

Belgian Congo, middle Congo River, Bolobo: one native skin; H. Lang, collector.

Belgian Congo, middle Congo River, Lukolela: one native skin; J. P. Chapin, collector.

Procavia ruwenzorii Neumann

Procavia ruwenzorii NEUMANN, 1902, Proc. Zool. Soc. London, 1902, II, p. 143.

Belgian Congo, West Ruwenzori, Bugongo Ridge, 8950 ft.: one mandible; J. P. Chapin, collector.

Uganda, East Ruwenzori: five skulls and fourteen mandibles; Carveth Wells, collector.

Procavia terricola schusteri (Brauer)

Dendrohyrax erricola schusteri BRAUER, 1917, Sitz. Ber. Gesell. naturf. Freunde, p. 296.

Tanganyika Territory, Uluguru Mts.: five skins and skulls; A. Loveridge, collector.

Procavia crawshayi Thomas

Procavia (Dendrohyrax) crawshayi THOMAS, 1900, Proc. Zool. Soc. London, p. 178.

Kenya Colony, Mt. Kenya: one skin with skull and partial skeleton; H. Lang, collector.

Kenya Colony, Nyeri: one skin with skull; F. G. Carnochan, collector.

Kenya Colony, Kijabe: one skin with skull; H. Lang, collector.

Kenya Colony, Kikuyu Escarpment, above Kijabe Station: four skins without skulls; A. J. Klein, collector.

Kenya Colony, locality unknown: one skeleton and sixteen skulls; A. J. Klein, collector.

The Nyeri specimen is somewhat lighter in color than that from Mt. Kenya, and the skins collected by Mr. Klein are darker and with a richer fur than either of these, but in other characters of the pelage there is close harmony. The series of skulls collected by Mr. Klein, for which all original data unfortunately has been lost, show a wide variation in sutural details of the occipital and parietal regions, but these seem to be fortuitous and in all probability every skull may be referred to *crawshayi*.

Procavia crawshayi laikipia (Dollman)

Dendrohyrax crawshayi laikipia DOLLMAN, 1911, Ann. Mag. Nat. Hist., (8) VIII, p. 131.

Kenya Colony, Uasin Gishu Plateau, 6000 ft.: four skins with skulls; Jenness Richardson, Jr., collector.

Kenya Colony, Nzoia Plateau, Cheringani Hills, 8700 ft.: one skin with skull; Jenness Richardson, Jr., collector.

These hyraxes, though differing in a few respects from the type description of *P. c. laikipia*, appear to be referable to that race. The skins bear a striking superficial resemblance to *P. bettoni*, but in the skull and in the character of the dorsal spot are very close to *crawshayi*. Unlike *crawshayi* the orbits of these specimens are not completely closed. These are the hyraxes that were referred to *Dendrohyrax bettoni* by Dr. J. A. Allen (Bull. A. M. N. H., XXXIII, Art. 26, p. 340) in his report on the Rainsford-Richardson Expedition.

Procavia bettoni Thomas and Schwann

Procavia bettoni THOMAS AND SCHWANN, 1904, Abstr. Proc. Zool. Soc., London, No. 6, p. 23. (See also Proc. Zool. Soc., London, 1904, I, p. 463.)

Kenya Colony, Muthaiga (near Nairobi): two skins with skulls; D. L. Sage and F. P. Matthews, collectors.

There is a single pair of inguinal mammae in this species.

